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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/798,422

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EXAMINER

ROJAS, OMAR R

ART UNIT

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2874

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DELIVERY MODE

08/29/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/798,422

Applicant(s)

HORINO ET AL.

Examiner

Omar Rojas

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 12-17, 29-47, and 50 is/are rejected.
- 7) ☒ Claim(s) 6-11, 18-28 and 48 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. <u>20070730</u> . |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____. | 6) <input checked="" type="checkbox"/> Other: <u>Detailed Action</u> . |

DETAILED ACTION

This supplemental Office action replaces the previous Office action mailed on July 18, 2007. The response period for reply is reset from the mailing date of this Office action.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 23, 2007 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1-5, 12-17, 29-47, and 49 are considered powerful and compelling but are also moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. **Claims 1-4, 12, 29, and 46 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Patent No. US 6,377,743 B1 to Ueda et al. ("Ueda").**

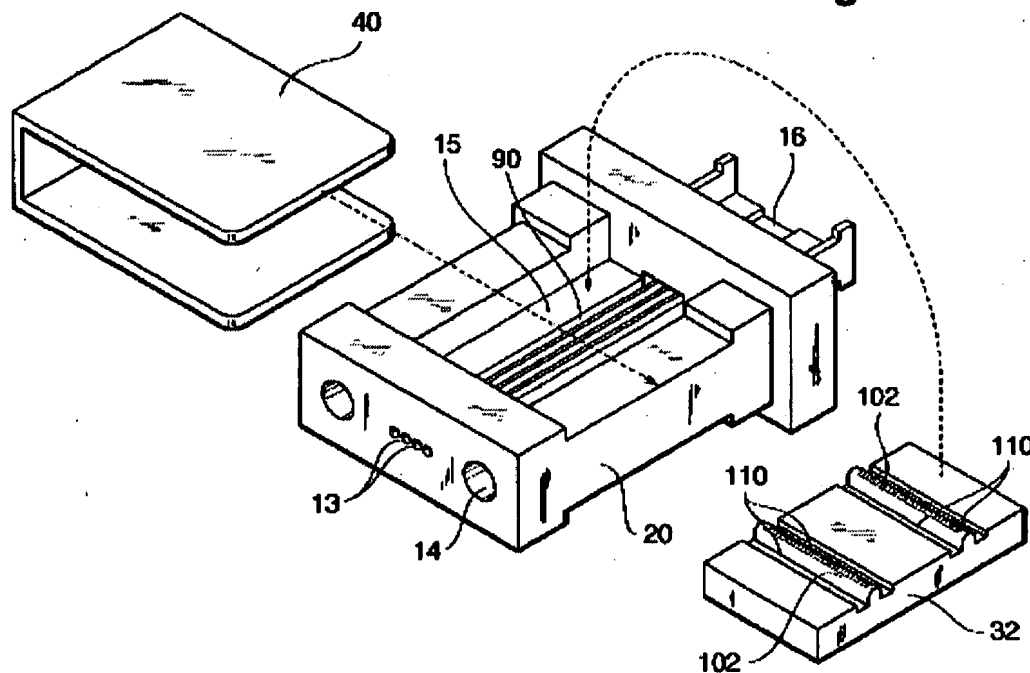
In re claim 1, Ueda discloses in Figures 1-5, an optical fiber fixing system for fixing an optical fiber comprising:

a fixing body 20/2 comprising a first groove 90/9, formed in a top surface thereof, extending in a first direction to support the optical fiber along its axial direction; and

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a pressing body 32/3 comprising a protrusion 102/10, formed on a first surface thereof, a longer part of the protrusion 102/10 extending in a lateral direction, wherein said lateral direction is substantially perpendicular to the direction of the first groove 90/9, and

the first surface of the pressing body 32/3 faces the first surface of the fixing body 20/2 as is seen in Figures 1 and 3. Figure 2 of Ueda is reproduced below.

Fig.2

In re claims 2-4, 12, 29, and 46, the claimed limitations are further described by Ueda at column 4, lines 15-44 and/or also seen in Figures 1-4.

5. Claims 1-3, 12, 29, and 46 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Patent No. US 6,655,433 B1 to Hirayama et al. ("Hirayama").

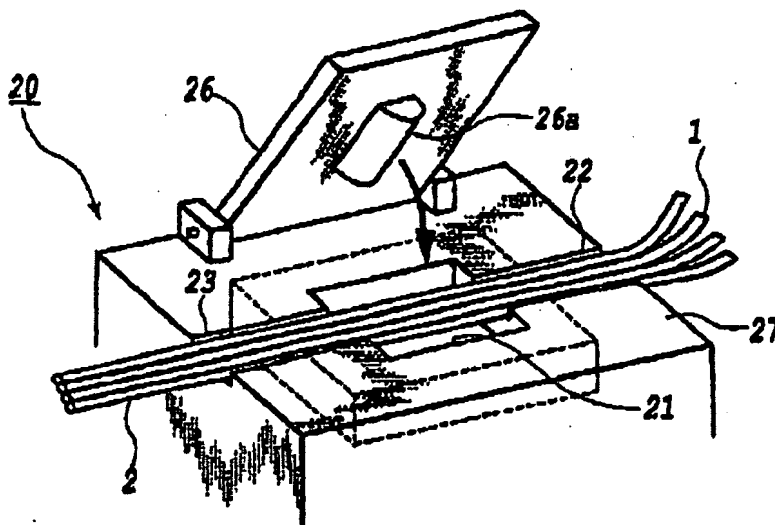
In re claim 1, Hirayama discloses in Figures 2A-2B, an optical fiber fixing system for fixing an optical fiber comprising:

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a fixing body 27 comprising a first groove 22/23, formed in a top surface thereof, extending in a first direction to support the optical fiber 1 along its axial direction; and

a pressing body 26 comprising a protrusion 26a, formed on a first surface thereof, a longer part of the protrusion 26a extending in a lateral direction, wherein said lateral direction is substantially perpendicular to the direction of the first groove 22/23, and

wherein the first surface of the pressing body 26 faces the first surface of the fixing body 27 as is apparent from Figure 2A. Figure 2A of Hirayama is reproduced below.



In re claims 2, 3, 12, 29, and 46, the claimed limitations are clearly apparent from Figures 2A-2B of Hirayama.

6. Claims 32-38, 40, 43, 47, 49, and 50 and are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Patent No. 5,717,813 to Harman et al. ("Harman").

In re claim 32, Harman discloses an optical fiber fixing system (Figures 1-4) for fixing an optical fiber comprising:

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a fixing body **12/40/50** comprising a first groove **28** formed in a first surface thereof, and a second groove **22** formed in a second surface parallel to the first surface, both grooves extending in a first direction to support the optical fiber **37** along its axial direction; and

a pressing body **14/54** comprising a planar clamp portion (i.e., the flat surfaces surrounding protrusions **16**) facing the first surface of the fixing body **12/40/50**, and a guide portion/protrusion **16** facing the second surface of the fixing body **12/40/50** and comprising two sloped portions configured to interface with the second groove **22** to align the optical fiber therein. Figure 1 of Harman is reproduced below.

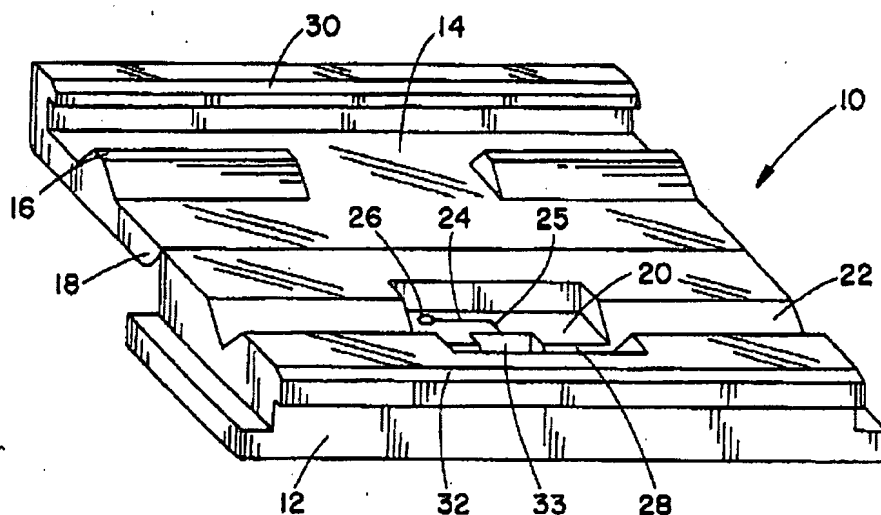


FIG. 1

In re claims 33-35, 37, 38, 40, 43, and 49-50, the additional limitations are clearly apparent from Harman in view of Figures 1-4 and column 2, lines 25-65.

In re claims 36 and 47, the specified limitations are considered inherently present in Harman's device because Harman's device has the same exact physical structure to what is being claimed.

Claim Rejections - 35 USC § 103

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. **Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda or Hirayama as applied to claim 1 above, and further in view of Patent No. 5,993,070 to Tamekuni et al. ("Tamekuni").**

The Tamekuni patent has been made of record in a previous Office action.

In re claim 5, Ueda or Hirayama only differs from the claim in that a trapezoid-shape is not explicitly disclosed. Tamekuni, on the other hand, discloses that V-shaped and trapezoidal-shaped grooves are equivalent structures for holding optical fibers (Tamekuni, column 7, lines 50-62). Interchanging equivalent structures is generally a matter of obvious design choice. Therefore, it would have been obvious to one of ordinary skill at the time of the claimed invention to obtain the invention specified by claim 5 in view of Ueda or Hirayama combined with Tamekuni.

9. **Claim 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda or Hiramaya as applied to claims 1 and 12 above.**

In re claims 13 and 14, Ueda or Hiramaya only differs from claims 13 and 14 in that neither patent teaches forming the pressing body of ceramic or metal (note: the protrusion is part of pressing body in Ueda and Hirayama). However, ceramic and metal were well-known materials used in optical fiber fixing systems at the time of the claimed invention. It would have been desirable to choose ceramic or metal to form the pressing body of Ueda or Hiramaya in order to

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obtain added strength, durability, and/or ease of manufacturing. Therefore, it would have also been obvious to one of ordinary skill in the art at the time of the claimed invention to obtain the invention specified by claims 13 and 14 in view of Ueda or Hiramaya.

In re claim 15, Ueda or Hiramaya only differs from the claim in that a prismatic shape is not disclosed. A change in shape without a perceived criticality has been held as a matter of obvious design choice. See MPEP § 2144.04. Therefore, because no perceived criticality is disclosed by applicant(s) for the use of a prismatic shape, it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to obtain the invention specified by claim 15 in view of Ueda or Hiramaya.

In re claims 16 and 17, the invention of claim 15 has been shown to be obvious in view of Ueda or Hiramaya. Thus, Ueda or Hiramaya further differs from claims 16 and 17 in that forming the pressing body of either ceramic or metal is not disclosed. However, ceramic and metal were well-known materials used in optical fiber fixing systems at the time of the claimed invention. It would have been desirable to choose ceramic or metal to form the pressing body of Ueda or Hiramaya in order to obtain added strength, durability, and/or ease of manufacturing. Therefore, it would have also been obvious to one of ordinary skill in the art at the time of the claimed invention to obtain the invention specified by claims 16 and 17 in view of Ueda or Hiramaya.

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10. Claims 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda or Hiramaya as applied to claim 1 above and further in view of applicant's admitted prior art ("APA").

In re claims 30 and 31, Ueda or Hiramaya only differs from the claims in that Ueda or Hiramaya does not disclose a pair of the optical fiber fixing system of claim 1 for respectively fixing a pair of optical fibers set up at an equal distance from a butting section and fusion-splicing the optical fibers. APA, as seen in Figure 1 of the application drawings, discloses a pair of optical fiber fixing systems 105 for respectively fixing a pair of optical fibers 103 set up at an equal distance from a butting section 107 and fusion-splicing the optical fibers (see paragraph [06] of the specification). The motivation for combining APA with Ueda or Hiramaya would have been to increase the transmission distance in Ueda or Hiramaya by splicing additional optical fiber using a known optical fiber fusion-splicing technique from the prior art. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to obtain the invention specified by claims 30 and 31 in view of Ueda or Hiramaya combined with APA.

11. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harman as applied to claim 32 above, and further in view of Tamekuni.

In re claim 39, Harman only differs from the claim in that a trapezoid-shape is not explicitly disclosed. Tamekuni, as previously discussed, discloses that V-shaped and trapezoidal-shaped grooves are equivalent structures for holding optical fibers (Tamekuni, column 7, lines 50-62). Interchanging equivalent structures is generally a matter of obvious design choice. Therefore, it

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would have been obvious to one of ordinary skill at the time of the claimed invention to obtain the invention specified by claim 39 in view of Harman combined with Tamekuni.

12. Claims 41 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harman as applied to claim 32 above.

In re claims 41 and 42, Harman only differs from the claims in that forming the pressing body of either ceramic or metal is not disclosed (note: the protrusion is part of pressing body in Harman). However, ceramic and metal were well-known materials used in optical fiber fixing systems at the time of the claimed invention. It would have been desirable to choose ceramic or metal to form the pressing body of Harman in order to obtain added strength, durability, and/or ease of manufacturing. Therefore, it would have also been obvious to one of ordinary skill in the art at the time of the claimed invention to obtain the invention specified by claims 41 and 42 in view of Harman.

13. Claims 44 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harman as applied to claim 32 above and further in view of applicant's admitted prior art ("APA").

In re claims 44 and 45, Harman only differs from the claims in that Harman does not disclose a pair of his optical fiber fixing systems for respectively fixing a pair of optical fibers set up at an equal distance from a butting section and fusion-splicing the optical fibers. APA, as seen in Figure 1 of the application drawings, discloses a pair of optical fiber fixing systems 105 for respectively fixing a pair of optical fibers 103 set up at an equal distance from a butting section

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107 and fusion-splicing the optical fibers (see paragraph [06] of the specification). The motivation for combining APA with Harman would have been to increase the transmission distance in Harman by splicing additional optical fiber using a known optical fiber fusion-splicing technique from the prior art. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to obtain the invention specified by claims 44 and 45 in view of Harman combined with APA.

Allowable Subject Matter

14. Claims 6-11, 18-28, and 48 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

15. The following is a statement of reasons for the indication of allowable subject matter: Regarding claims 6-11, 28, and 48, the primary reason for allowance of the claims is the inclusion of the fixing body further comprises a second groove, formed in a second surface thereof, shaped to support the optical fiber; the second groove extends in the first direction laterally adjacent to the first groove so that both the first and second grooves can axially support the optical fiber simultaneously; and the second surface of the fixing body is arranged above, and laterally adjacent to, the first surface of the fixing body to form a stepped structure as recited by base claim 6.

Regarding claims 18-27, the primary reason for allowance of the claims is the inclusion off the protrusion is formed of a material different from that of the pressing body and is arranged in a

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protrusion mounting groove formed in a first surface of the pressing body as recited by base claim 18.

Conclusion

16. Applicant(s) are reminded that unforeseeable amendments to the claims may result in a new ground of rejection and a subsequent Final Rejection of the application. See MPEP § 706.07(a).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Omar Rojas whose telephone number is (571) 272-2357. The examiner can normally be reached on Monday-Friday (9:00PM-5:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rod Bovernick, can be reached on (571) 272-2344. The official facsimile number for regular and After Final communications is (571) 273-8300. The examiner's RightFAX number is (571) 273-2357.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Omar Rojas/
Patent Examiner, Art Unit 2874

or
August 25, 2007